

From the INTERNATIONAL SEARCHING AUTHORITY

**PCT**

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT  
OR THE DECLARATION

(PCT Rule 44.1)

To:

NEEDLE & ROSENBERG, P.C.  
Attn. FLOAM, D. Andrew  
Suite 1200  
The Candler Building  
Atlanta, GA 30303-1811  
UNITED STATES OF AMERICA

OCT 02 2000

NEEDLE & ROSENBERG

Date of mailing  
(day/month/year)

28/09/2000

Applicant's or agent's file reference

19141.0048P1

**FOR FURTHER ACTION**

See paragraphs 1 and 4 below

International application No.

PCT/US 00/ 16576

International filing date  
(day/month/year)

15/06/2000

Applicant

SPECTRX, INC.

1. ☒ The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

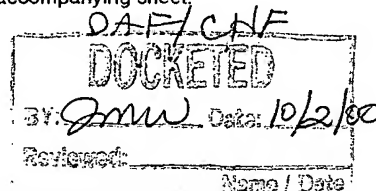
**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

**When?** The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

**Where?** Directly to the International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland  
Fascimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.



2. ☐ The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

Shortly after **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

Within **19 months** from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within **20 months** from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority



European Patent Office, P.B. 5818 Patentlaan 2  
NL-2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
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Authorized officer

Marie-Françoise Provot

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

## INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

### What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

### When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

### Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

### How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

### What documents must/may accompany the amendments?

#### Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:  
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:  
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:  
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or  
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:  
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

**"Statement under article 19(1)" (Rule 46.4)**

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

**It must be in the language in which the international application is to be published.**

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

**Consequence if a demand for international preliminary examination has already been filed**

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

**Consequence with regard to translation of the international application for entry into the national phase**

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>19141.0048P1</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/US 00/16576</b>	International filing date (day/month/year) <b>15/06/2000</b>	(Earliest) Priority Date (day/month/year) <b>18/06/1999</b>
Applicant <b>SPECTRX, INC.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

### 1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

4

☐ as suggested by the applicant.

☐ None of the figures.

☒ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A61B18/20

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 33444 A (TRANSMEDICA INTERNATIONAL INC) 6 August 1998 (1998-08-06)  page 16, line 35 -page 17, line 25 page 18, line 30 -page 19, line 17 page 21, line 3 - line 27 page 31, line 23 -page 32, line 12 page 39, line 7 - line 29 page 46, line 25 -page 47, line 9 --- -/--	1,2,7,8, 13-20, 22,23, 28-30, 38,39,41

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

21 September 2000

Date of mailing of the international search report

28/09/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Mollenhauer, R

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 51235 A (GEN HOSPITAL CORP ;PALOMAR MEDICAL TECHNOLOGIES I (US)) 19 November 1998 (1998-11-19)	1,2, 4-10, 13-18, 22,38,39 3
Y	page 8, line 4 - line 31 page 10, line 4 - line 14 page 17, line 19 -page 18, line 6 page 21, line 26 -page 22, line 7 ----	
X	WO 97 22384 A (LASER IND LTD) 26 June 1997 (1997-06-26)  page 10, line 18 - line 26; claim 7; figure 8 ----	1,2, 13-17, 19,20, 38,39,41
X	WO 94 01904 A (BEYER CRAIG F) 20 January 1994 (1994-01-20)  page 4, paragraph 3 - paragraph 4 page 5, paragraph 3 -page 6, paragraph 1 page 8, paragraph 1 ----	1,7,8, 13,19, 20, 37-39,41
X	US 5 586 981 A (HU XIN-HUA) 24 December 1996 (1996-12-24)  column 5, line 20 - line 29 ----	1,2, 13-20, 38,39,41
X	US 5 437 658 A (MULLER DAVID F ET AL) 1 August 1995 (1995-08-01)  column 4, line 17 - line 38 ----	1,2,13, 19,20, 38,39,41
Y	US 4 826 269 A (STREIFER WILLIAM ET AL) 2 May 1989 (1989-05-02) abstract ----	3
A	US 5 643 252 A (FLOCK STEPHEN T ET AL) 1 July 1997 (1997-07-01) cited in the application the whole document -----	1-42

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No



US 00/16576

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9833444	A	06-08-1998	AU 5917398 A BR 9807816 A CN 1251508 T EP 1006902 A US 6056738 A	25-08-1998 08-03-2000 26-04-2000 14-06-2000 02-05-2000
WO 9851235	A	19-11-1998	AU 7568698 A EP 0991372 A	08-12-1998 12-04-2000
WO 9722384	A	26-06-1997	AU 704892 B AU 1071097 A BR 9612145 A EP 0874666 A US 5868732 A US 5879346 A GB 2308307 A	06-05-1999 14-07-1997 13-07-1999 04-11-1998 09-02-1999 09-03-1999 25-06-1997
WO 9401904	A	20-01-1994	AU 4773093 A	31-01-1994
US 5586981	A	24-12-1996	NONE	
US 5437658	A	01-08-1995	AU 5323494 A EP 0741545 A JP 8503625 T WO 9407424 A	26-04-1994 13-11-1996 23-04-1996 14-04-1994
US 4826269	A	02-05-1989	NONE	
US 5643252	A	01-07-1997	AU 5587694 A EP 0666726 A WO 9409713 A US 5839446 A JP 10501992 T	24-05-1994 16-08-1995 11-05-1994 24-11-1998 24-02-1998

# PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference EB 5784		<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/16576	International filing date (day/month/year) 15/06/2000	Priority date (day/month/year) 18/06/1999	
International Patent Classification (IPC) or national classification and IPC A61B18/20			
Applicant SPECTRX, INC. et al.			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 9 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the report</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input checked="" type="checkbox"/> Certain defects in the international application</li> <li>VIII <input checked="" type="checkbox"/> Certain observations on the international application</li> </ul>			
Date of submission of the demand  05/01/2001		Date of completion of this report  24.07.2001	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized officer  Fischer, O  Telephone No. +49 89 2399 2327 	



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US00/16576

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-18 as originally filed

**Claims, No.:**

1-42 as originally filed

**Drawings, sheets:**

1/7-7/7 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US00/16576

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims
	No:	Claims 1, 2, 4, 6-14, 17-20, 22, 23, 28-30, 32, 38, 39, 41
Inventive step (IS)	Yes:	Claims
	No:	Claims 3, 5, 15, 16, 21, 24-27, 31, 33-36, 40, 42
Industrial applicability (IA)	Yes:	Claims 1-42
	No:	Claims

2. Citations and explanations  
**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/US00/16576

**Re Item V**

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Reference is made to the following documents:

- D1: WO-A-98 33444 (TRANSMEDICA INTERNATIONAL INC) 6 August 1998
- D2: WO-A-98 51235 (THE GENERAL HOSPITAL CORP; PALOMAR MEDICAL TECHNOLOGIES INC.) 19 November 1998
- D3: WO-A-97 22384 (LASER IND LTD) 26 June 1997
- D4: WO-A-94 01904 (BEYER CRAIG F) 20 January 1994
- D5: US-A-5 586 981 (HU XIN-HUA) 24 December 1996
- D6: US-A-5 437 658 (MULLER ET AL) 1 August 1995
- D7: US-A-4 826 269 (STREIFER WILLIAM ET AL) 2 May 1989

2. The subject-matter of claims 1, 2, 4, 6-14, 17-20, 22, 23, 28-30, 32, 37-39 and 41 is not new in the sense of Article 33 (2) PCT.

2.1 Claims 1 and 38

Document D1 discloses a light beam generation and focusing device for directing at least one focused beam of light at a surface plane (p.11, l. 20-23), said device comprising: a light source constructed and arranged to emit at least one beam of light ("laser beam"); and a lens assembly constructed and arranged to focus said at least one beam of light on the surface plane (p. 11, l. 28-29); said device being constructed and arranged to sequentially direct the at least one beam of light to at least two spaced locations on the surface plane (p. 16, l. 35 - p. 17, l. 25 and p. 21, l. 4-20).

2.2 Claim 2

D1 shows a device according to claim 1, wherein the lens assembly comprises a collimating lens positioned with respect to the at least one beam of light (p. 35, l. 7-13 and fig. 3) and a focusing lens spaced from the collimating lens (p. 38, l. 16-18 and fig. 3).

**2.3 Claims 4 and 6**

The device of D1 may comprise a laser diode as light source (p. 17, l. 1-4). It is common knowledge that such a laser diode includes a micro lens mounted thereon.

**2.4 Claims 7 to 12**

The light source of D1 may be a laser diode or a semiconductor laser diode chip (p. 17, l. 1-4).

As seen in point 2.3 above, a laser diode usually includes a micro lens, in the particular case a cylindrical micro lens.

In D1 the laser diode is in a casing and a focusing lens is affixed to the casing and spaces from the laser diode (p. 35, l. 7-13 and p. 38, l. 16-18 and fig. 3). Moreover, a collimating lens is affixed to the laser diode and the focusing lens is spaced from the collimating lens (fig. 3).

**2.5 Claims 13, 14 and 39**

The device of D1 comprises a beam steering device constructed and arranged to direct said at least one beam of light to said at least two spaced locations on the surface plane (p. 16, l. 35 - p. 17, l. 25 and p. 21, l. 4-20).

The beam steering device ("scanner") is made up of optical components and is able under machine (i.e. drive) control to direct the beam to a first site and then to a second spaced site (p. 21, l. 4-20). Therefore a beam steering device according to claim 14 is disclosed.

**2.6 Claims 17 and 18**

D1 shows a scanner being controlled by microprocessor to sequentially direct the beam to several spaced locations (p. 21, l. 4-20 and fig. 43). Hence D1 discloses a controller coupled to the beam steering device ("scanner"), said controller being constructed and arranged to control the movement of the beam steering device to sequentially direct the beam of light to at least two spaced locations on the surface plane. The beam steering device comprises a beam steering optical element in the

form of a tilted or angled plane ("oscillating mirrors") (p. 17, l. 21-25).

**2.7 Claims 19 and 20**

The device of D1 is constructed and arranged to sequentially direct the beam of light to at least four spaced locations on the surface plane in a predetermined pattern and these spaced locations define a predetermined pattern thereon. (fig. 43).

**2.8 Claims 22 and 23**

In D1, the light source and the lens assembly are fitted within a housing (p. 31, l. 23 - p. 32, l. 12 and fig. 1), the housing being sized and shaped to fit in the hand of a device user (p. 8, l. 16-21). The device of D1 further comprises a power supply within said housing for powering said light source (p. 31, l. 23-29).

**2.9 Claim 28 to 30 and 32**

D1 discloses a diode bar containing up to ten laser diodes on a single chip (p. 46, l. 25-34). Therefore, the device of D1 can be said to have a light source comprising at least two laser diodes mounted on a mounting block, in particular a light source comprising four spaced laser diodes mounted on a common mounting block. The laser diodes can be said to be spaced from one another to form a predetermined pattern of beams of light directed to a surface plane.

**2.10 Claim 37**

As seen for claim 17 (point 2.5 above), the device of D1 has a controller constructed and arranged to sequentially direct said at least one beam of light to said at least two spaced locations on the surface plane (p. 21, l. 4-20).

**2.11 Claims 38, 39 and 41**

As a consequence of points 2.1, 2.5 and 2.7 above, the method steps according to claims 38, 39 and 41 are also anticipated by the disclosure of D1 (Article 33 (2) PCT).

2.12 It should be noted that the following documents also anticipate the subject-matter of claim 1 (Article 33 (2) PCT):

- D2 shows a light beam generation and focusing device for directing at least one focused beam of light at a surface plane, said device comprising: a light source constructed and arranged to emit at least one beam of light (p. 8, l. 4-31); and a lens assembly constructed and arranged to focus the beam of light (p. 10, l. 4-14); said device being constructed and arranged to sequentially direct the beam of light to at least two spaced locations on the surface plane (p. 21, l. 26 - p. 22, l. 7 and fig. 12B).

- D3 shows a light beam generation and focusing device according to claim 1 (p. 10, l. 18-26 and fig. 8).

- D4 also anticipates the subject matter of claim 1 (p. 4, third and fourth paragraphs).

- D5 (col. 5, l. 21-28) and D6 (col. 7, l. 7-13; col. 8, l. 66 - col. 9, l. 16; figs. 1-4B) also disclose a device according to claim 1.

3. The subject-matter of claims 3, 5, 15, 16, 21, 24-27, 33-36, 40 and 42 does not involve an inventive step within the meaning of Article 33 (3) PCT.

#### 3.1 Claims 3 and 5

Document D7 (see abstract) shows a light beam generation and focusing device comprising a light source and a lens assembly, wherein the lens assembly may comprise Fresnel lenses or cylindrical lenses. Accordingly the subject-matter of claims 3 and 5 does not involve an inventive step (Article 33 (3) PCT).

#### 3.2 Claims 15 and 16

A drive means comprising a stepper motor is a straightforward possibility which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, especially as the advantages thus achieved can readily be foreseen. Moreover in D1, the optical element of the beam steering device is a tilted or angled

plane ("oscillating mirrors", p. 17, l. 21-25). It is also obvious that a motor needs a motor controller coupled to it.

Hence, the subject-matter of claims 15 and 16 lacks an inventive step (Article 33 (3) PCT).

### 3.3 Claims 21 and 42

Fig. 43 of D1 shows a pattern of illuminated spots spaced equidistantly one from another on the skin (see also p. 17, l. 11-20). The skilled person would select the specific spacing according to circumstances without exercising inventive skills (Article 33 (3) PCT).

### 3.5 Claims 24 and 25

In D1 the beam steering device is not positioned within said housing. It is obvious that the skilled person wishing to improve the handling of the device would include the beam steering device within the housing.

It is obvious that the various components (power supply, light source and beam steering device) need to be controlled in a certain manner. Therefore, the skilled person wishing to improve the handling of the device would obviously include all the components within the same housing.

### 3.6 Claims 26, 27 and 40

In D1 a beam steering device is used to direct multiple beams, derived from a single laser beam, to different spaced locations on the skin. The feature of using at least two laser diodes (i.e the step of emitting at least two separate beams) is merely an equivalent of the solution disclosed in D1 and could therefore not involve an inventive step (Article 33 (3) PCT).

The feature of a controller coupled to each laser diode is also an obvious measure.

### 3.7 The remaining dependent claims 31, 33 to 36 are obvious design features which do not involve an inventive step (Article 33 (3) PCT).

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/US00/16576

**Re Item VII**

**Certain defects in the international application**

1. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 and D2 is not mentioned in the description, nor are these documents identified therein.
2. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

**Re Item VIII**

**Certain observations on the international application**

1. Claims 20 and 21 relate to matter which is not part of the invention ("at least four spaced locations on the surface plane"), therefore the matter for which protection is sought is not clear from these claims (Article 6 PCT). These claims should therefore be deleted.
2. The dependency of claim 30 leads to a lack of clarity within the meaning of Article 6 PCT. It appears that claim 30 should be dependent from claim 28 rather than from claim 29.



From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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POTTS, KERR & CO  
15 Hamilton Square  
Birkenhead  
Merseyside CH41 6BR  
GRANDE BRETAGNE

PCT

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing  
(day/month/year) 24.07.2001

Applicant's or agent's file reference  
EB 5784

IMPORTANT NOTIFICATION

International application No.  
PCT/US00/16576

International filing date (day/month/year)  
15/06/2000

Priority date (day/month/year)  
18/06/1999

Applicant  
SPECTRX, INC. et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

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# PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

**PCT**

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
CP2/5C24  
Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE  
in its capacity as elected Office

<b>Date of mailing (day/month/year)</b> 05 April 2001 (05.04.01)	<b>Applicant's or agent's file reference</b> 19141.0048P1
<b>International application No.</b> PCT/US00/16576	<b>Priority date (day/month/year)</b> 18 June 1999 (18.06.99)
<b>International filing date (day/month/year)</b> 15 June 2000 (15.06.00)	
<b>Applicant</b> KUMAR, Krishna et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
05 January 2001 (05.01.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was  
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	<b>Authorized officer</b> R. Forax Telephone No.: (41-22) 338.83.38
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